



---

## **UNDERCURRENTS**

---

*Issue 5, July 2006*

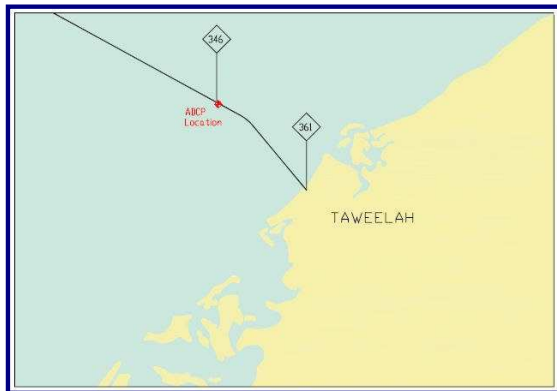
Welcome to the 5<sup>th</sup> issue of our newsletter, in which we highlight our experiences at Oceanology in London in March, describe some of our recent projects and update you on company expansion. MSI has experienced significant growth over the past 12 months and this looks set to continue as we have already been awarded a number of long term contracts, both in Russia and Europe, and are waiting to hear on others. These contracts combined with the expansion into Australasia and the signing of an agreement for provision of services in Indonesia (see page 4) means that MSI can look forward to another busy year ahead. For more information on these articles or any other aspect of our business, please see our contact details at the base of each page. Don't forget to check our website [www.metocean.co.za](http://www.metocean.co.za) for regular updates.

---

### *MSI measures currents for Dolphin Project in UAE*

The Dolphin Project is the plan to appraise, develop and produce hydrocarbons from two offshore platform complexes in the "North Field" offshore Qatar. Hydrocarbons are to be transported via two 36" Sealines to an onshore processing plant at Ras Laffan. Processed sales gas from the plant is to be transported via a 48" Export Pipeline from Ras Laffan to a receiving plant at Taweelah in the UAE.

To assist with understanding the oceanographic conditions, Saipem (who are responsible for the design and construction of the Sealines and Export Pipeline) contracted MSI to provide current measurement offshore Taweelah in approximately 20m water depth.



For these measurements MSI deployed a mooring fitted with an RD Instruments 300kHz acoustic doppler current profiler (ADCP) and Sonardyne LRT lightweight acoustic release transponder (see schematic on right). The location of the ADCP is shown in the picture on the left (courtesy of Saipem).

All offshore operations were conducted from the vessel Jamuna 1, supplied by Saipem's Dredging Sub-Contractor Van



Oord. In addition to the deployment of the current measurement mooring, the MSI engineer assisted Van Oord with deployment of one of their own Datawell directional waveriders. See photograph overleaf of all equipment laid out on the vessel prior to deployment.

In this regard, special thanks goes to the Van Oord surveyors who assisted with the positioning and deployment of the ADCP.

Data were downloaded from the ADCP using RD Instruments WinSc software. The data were then imported into Matlab for further processing.

Various data products were provided to the client, including time series plots, joint distribution plots, current roses, histograms, progressive vector plots and tidal harmonics.

MSI has developed in house Matlab-based routines for processing oceanographic data. This allows us to provide almost any product required by the client.



*Another Project Management course completed*



MSI were once again responsible for presenting the Project Management Module of the Masters Degree in Applied Marine Science at the University of Cape Town (UCT). This year 30 students attended the course, comprising

groups from both Applied Marine Science and also from a Masters course in Conservation Biodiversity.

The module comprised formal lectures, working examples to illustrate the lecture material and a group assignment which brought together all the skills learnt during the course.

*MSI undertakes Malaysian programme...*



MSI, through our Malaysian partners Orogenic GeoExpro Sdn Bhd, have completed a tide, wave and current measurement programme for Murphy Oil. The project was conducted by Stefan Stimson and involved deploying an ADCP fitted with wave firmware in a bottom-frame.



All operations were conducted from the client-supplied vessel MV Kema Juan.

*...and finishes in Baku for now*

In Undercurrents issue 4 we reported on a long-term current measurement programme being undertaken by MSI, in close cooperation with Muir Matheson of Aberdeen, in the Shah Deniz field off Baku, Azerbaijan. We can report that this project had finished with the successful recovery of the mooring in March 2006.

The recovery of the mooring was conducted from the Yarenga and during this trip, the MSI engineer also assisted with servicing and deployment of Triaxys directional wave buoys.



All data from the 12 month measurement programme has been processed and we are currently compiling a summary report synthesising all the data.

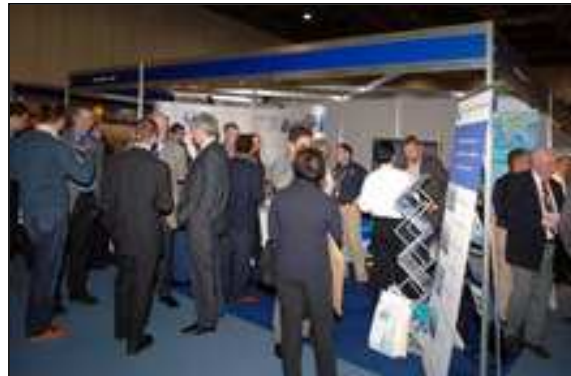
According to Colin Grant, BP's metocean advisor, the current data was used to assist with the installation of the platform facility at Shah Deniz (successfully completed in early May - see photo above) and will be used to confirm the design current used in the basis of design.

*MSI exhibits at Oceanology International in London*



From 21-23 March 2006 MSI exhibited, along with Muir Matheson of Aberdeen, at the Oceanology International conference and exhibition in London.

As with the previous OI in 2004, this year's exhibition was held at the ExCel Centre in London's docklands area and featured exhibitors from 581 companies, with more than 7,500 attendees coming through the doors.



On the afternoon of the opening day MSI and Muir Matheson held a joint cocktail party which was attended by many of our clients and suppliers.

MSI, on behalf of our associate company Lwandle Technologies, also attended the functions by Nortek and RBR Ltd for their agents where we were introduced formally to the new product ranges and discussed marketing strategies for 2006 and 2007.

*MSI expands in location...*

As some of you will be aware, Stefan Stimson relocated along with his family to Hobart in Australia at the end of 2005. Stef is in the process of establishing an MSI office in Hobart and will be responsible for marketing our services in Australasia, as well as maintaining operational control of all projects executed in the region.

Contact details for MSI in Australia are as follows:

PO Box 595  
Sandy Bay  
Tasmania 7006  
Australia  
Ph: +61 (406) 492166

Stef's e-mail address remains stefan@metocean.co.za

*...and in size*



MSI is pleased to announce that we have recruited Daniel Paul to the position of trainee oceanographic engineer. Daniel has an Honours degree in Physical Oceanography and a Masters in Maritime Studies and joins us after having spent a year in Sweden where he was involved in marine operations in the shipping industry.

Since joining us only a short while ago, Daniel has already worked on projects in Mozambique and Nigeria and based on his experiences thus far he is looking forward to working on our projects around the world.

*MSI signs agreement with Pageo*

MSI and PT Pageo Utama **PAGEO** have signed a collaboration agreement which formalises our respective company's desire to co-operate so that our complementary services and experience within the oil and gas industry will help us secure and execute metocean projects in Indonesia. Pageo is a fast growing Indonesian based service company formed in

late 2004 which is primarily focused on supporting the oil & gas, offshore construction and drilling industries. These services include survey, positioning, and subsea services, geotechnical / analogue / land surveys, tracking and telemetry and data processing and reporting.

The formalisation of our relationship is in line with MSI's strategy of identifying established partners in key geographical areas and working with them to secure metocean contracts.

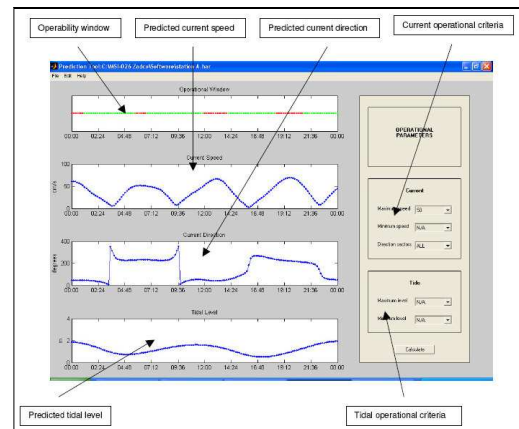
*MSI delivers another tide toolbox*



MSI, through Seatronics, has supplied one of their middle east clients with a Matlab-based suite of toolboxes which import tide data from various installations, calculate the tidal harmonics and then generate predictions based on these harmonics.

Once a predicted time series has been generated, the simple graphical user interface (GUI) allows the user to specify operational parameters which are then displayed on the time series according to a traffic-light colour system.

A screenshot from the GUI is shown below.



If you would like more info on the toolbox or would like MSI to tailor a package for you, please contact [bruce@metocean.co.za](mailto:bruce@metocean.co.za).